

CLAIM AMENDMENTS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (currently amended) A method of ~~protecting~~ treating a female reproductive system against an ~~artificial insult~~ comprising: ~~by~~ administering to a female patient a composition comprising an agent that antagonizes ~~one or more acid sphingomyelinase (ASMase) gene products, sphingosine-1-phosphate~~ in an amount sufficient to ~~protect~~ said female reproductive system from destruction caused by ~~said inhibit apoptosis induced by~~ an artificial insult, wherein said administration is *in vivo* or *ex vivo*, and wherein said artificial insult is a chemotherapeutic drug or radiation.

2-4. canceled

5. (currently amended) The method of ~~claim 4~~ claim 1, wherein said chemotherapeutic drug ~~comprises; is~~ 5FU, vinblastine, actinomycin D, etoposide, cisplatin, methotrexate, doxorubicin, or a combination thereof.

6. (currently amended) The method of claim 2 1, wherein said radiation insult ~~comprises~~ is ionization radiation, x-ray, infrared radiation, ultrasound radiation, heat, or a combination thereof.

7. (currently amended) The method of claim 2 1, wherein said radiation insult comprises an invasive radiation therapy, a non-invasive radiation therapy, or both.
8. (original) The method of claim 1, wherein said female reproductive system comprises ovaries.
9. (original) The method of claim 1, wherein said female reproductive system comprises oocytes.
10. (previously presented) The method of claim 1, wherein said female patient is in a reproductive age.
11. (previously presented) The method of claim 1, wherein said female patient is in a pre-reproductive age.
12. (previously presented) The method of claim 1, wherein said female patient is in a post-reproductive age.
- 13-16. canceled
17. (original) The method of claim 1, wherein said composition is administered at least once from about fifteen days to about two days prior to exposure to said insult.

18. (original) The method of claim 17, wherein said composition is administered at about seven days to about two hours prior to exposure to said insult.

19. canceled

20. (original) The method of claim 1, wherein said composition is administered orally, intravascularly, intraperitoneally, subcutaneously, intramuscularly, intra-uterine, intra-ovarian, rectally, topically, or a combination thereof.

21. (original) The method of claim 1, wherein said artificial insult is a result of a therapy against a disease or a disorder.

22. (original) The method of claim 21, wherein said disease or disorder comprises, cancer, rheumatoid arthritis, angioplasty, or restenosis.

23. (original) The method of claim 22, wherein said cancer comprises; colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chondroma, angiosarcoma, endotheliosarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, synovioma, mesothelioma, Ewing's tumor, leiomyosarcoma, rhabdomyosarcoma, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland carcinoma, papillary carcinoma, papillary adenocarcinomas, cystadenocarcinoma, medullary carcinoma, bronchogenic carcinoma, renal cell carcinoma, hepatoma, bile duct carcinoma, choriocarcinoma, seminoma,

embryonal carcinoma, Wilms' tumor, cervical cancer, lung carcinoma, small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocytoma, medulloblastoma, craniopharyngioma, ependymoma, pinealoma, hemangioblastoma, acoustic neuroma, oligodendrolioma, meningioma, melanoma, neuroblastoma, retinoblastoma, acute lymphocytic leukemia and acute myelocytic leukemia, chronic leukemia and polycythemia vera, lymphoma (Hodgkin's disease and non-Hodgkin's disease), multiple myeloma, Waldenstrom's macroglobulinemia, heavy chain diseases, or a combination thereof.

24-31. canceled

32. (currently amended) The method of claim 27 1, wherein said mammal female patient is a woman.

33-73. canceled

74. (currently amended) The method of claim 1, wherein the artificial insult is a ~~chemical insult and the chemical insult is a chemotherapeutic drug.~~

75-80. canceled